

ABSTRACT

In one embodiment, the invention relates to a serial line circuit that comprises a serial information (SI) bus and at most two isolators interposed between a pair of programmable devices. In the TRANSMIT direction, a first programmable device is configured to multiplex serial data received from a plurality of serial UARTs and to route such data to the second programmable device over the SI bus and through a first isolator. In the RECEIVE direction, the second programmable device is configured to sample data from a plurality of serial interconnects and to route the sampled data to the first programmable device. The sampled data is routed over the SI bus and through a second isolator. The data transmission over the SI bus is in accordance with a proprietary serial transmission protocol described below.